New records of Hydrophorinae (Diptera, Dolichoppdidae) from Turkey, with the description of a new species of Scellus Loew

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New records of Hydrophorinae (Diptera, Dolichopodidae) from Turkey, with the description of a new species of *Scellus* Loew

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Faunistic data are given for 7 species of Hydrophorinae from Turkey. *Scellus paramonovi* Stackelberg, *Thinophilus flavipalpis* Zetterstedt, and *Hydrophorus callostomus* Loew are recorded for the first time for Turkey. *Scellus grichanovi* is described as new and a differential diagnosis is given for the separation of the closely related *Scellus paramonovi*.

Keywords: Dolichopodidae, Hydrophorinae, new records, new species, Turkey.

INTRODUCTION

Adults and larvae of Hydrophorinae are like most Dolichopodidae predators, and larvae are thought to be aquatic (Hurley 1985). Members of the subfamily usually occur in littoral and coastal habitats or near waterfalls, and many species are seen skating on the water surface. Most Palaearctic hydrophorines are boreal or montane forms (Negrobov 1978a). From the Palaearctic region 172 species are recorded and the largest genus *Hydrophorus* comprises 43 species (Yang *et al*. 2006).

This is the fourth contribution to the knowledge of the Dolichopodidae of Turkey, treating the Hydrophorinae. Previous parts treated the Sympycninae (Naglis 2009), the Diaphorinae (Naglis 2010), and the Dolichopodinae (Naglis 2011). Additional papers on the dolichopodid fauna of Turkey are summarized in Naglis (2011). Since then Tonguç & Barlas (2011) listed 6 new records for Turkey (*Dolichopus austriacus* erroneously listed as a new record). In this paper faunistic data are provided for 7 species of Hydrophorinae including 3 new records and 1 new species. As a result 155 species are actually known from Turkey.

MATERIAL AND METHODS

The bulk of material for the present study was collected by the late Wolfgang Schacht (Zoologische Staatssammlung München, ZSM) in the Eastern part of Turkey in the years 1983 and 1985, and one specimen by Y. Kilic in the year 2000. For each species the distribution in the area surrounding Turkey is given, which comprises Eastern Europe, the Caucasus, and the Middle East. Distribution data is mostly according to Pollet (2004) and Yang *et al*. (2006), doubtful records are omitted.

The morphological terminology for adult structures follows mainly McAlpine (1981) and Merz & Haenni (2000). For the male genitalia morphology the terminology of Cumming *et al*. (1995) and Sinclair (2000) is used, except the terms cingulum and signum sensu Hurley (1995). The following abbreviations are used:

ad = anterodorsal; av = anteroventral; pd = posterodorsal; pv = posteroventral; CuAx ratio = length of crossvein dM-Cu to length of distal section of CuA; RMx ratio = distance between R_{2+3} and R_{4+5} to distance between R_{4+5} and M at wing margin.

DESCRIPTION OF NEW SPECIES

Scellus grichanovi sp. n.

(Figs. 1A–D)

Material examined. Holotype male: Turkey, Bolu, Dörtdivan, 1100 m, Yagbaslar K., 25.VI.2000, leg. Y. Kilic. (ZSM).

Description. Body length: 5.5 mm, wing length 5.6 mm.

Head: Face narrow, below antennae about as wide as height of first flagellomere; face and clypeus with dense greyish-yellow pruinosity, frons with greyish pruinosity; postoculars black; palpus greyish-yellow, with small black setae; proboscis dark brown; antenna brownish-black. Antenna (Fig. 1A): scape long and cylindrical, longer than first flagellomere; pedicel short and roundish, with an apical circlet of short setae; first flagellomere subovate, 1.5 times as long as high; arista dorsal, bare.

Thorax: Mesonotum dark metallic bronze-green, with greyish pruinosity (most thoracic setae broken off, but based on visible sockets identical as in *S. paramonovi*); pleura dark metallic bronze-green, shining, with weak grey pruinosity.

Legs: Dark metallic bronze-green, coxae with greyish pruinosity, hairs and setae black except as noted. Fore leg: Coxa with a ventral row of setae, basal 6–8 setae small, 4 anterior-most setae strong; femur (Fig. 1B) basally swollen, with a pv row of alternately long and short spine-like setae on entire length, and an av row of shorter setae; tibia (Fig. 1B) with a strong, flattened, subovate ventral spine at $\frac{1}{2}$, short ventral setae, and a short flattened lobe apically; claws and pulvilli well developed; relative length of femur/tibia and tarsomeres: 55/50:30:20:15:7:6. Mid leg: Coxa bare; femur long and slender, slightly curved, with a row of 3 strong ad setae on apical half, a row of 3–4 short av setae on apical third, a row of 7–10 short, spine-like pv setae on apical third, and 1 small but distinct dorsal seta at $\frac{3}{4}$; tibia (Fig. 1C) straight, not swollen, with 3 small ad setae, a row of 5–6 short av setae, 1 short ventral seta at $\frac{2}{3}$, 1 very long and strong ventral seta at $\frac{1}{2}$, 2 strong, closely inserted ventral setae at $\frac{3}{4}$, and a pv row of long, curled hairs on apical fourth; basitarsus with a strong pv seta basally; claws and pulvilli well developed; relative length of femur/tibia and tarsomeres: 97/90:35:18:12:7:6. Hind leg: Coxa bare; femur long and slender, slightly curved, with 4 strong ad setae, 3–4 short av setae, 2–3 short pd setae, and 3–4 short pv setae; tibia straight, not swollen, almost bare, with 1 single av seta at $\frac{3}{4}$, and 1 strong, long pv seta apically; basitarsus bare (remaining tarsomeres lacking); relative length of femur/tibia and tarsomeres: 104/86:48:–:–:–:–.

Wing: With brownish maculation in apical half from middle of R_{2+3}, along entire length of R_{2+3} and R_{4+5}, on basal section of M, and along dM-Cu; veins dark brown; R_{4+5} curved towards M before wing apex; M gently bent towards R_{4+5} at $\frac{1}{3}$ from dM-Cu, becoming subparallel to join costa before wing apex; CuAx ratio: 1.5; RMx ratio: 4.3; lower calypter yellowish, with small yellow setae; halter dark brown.

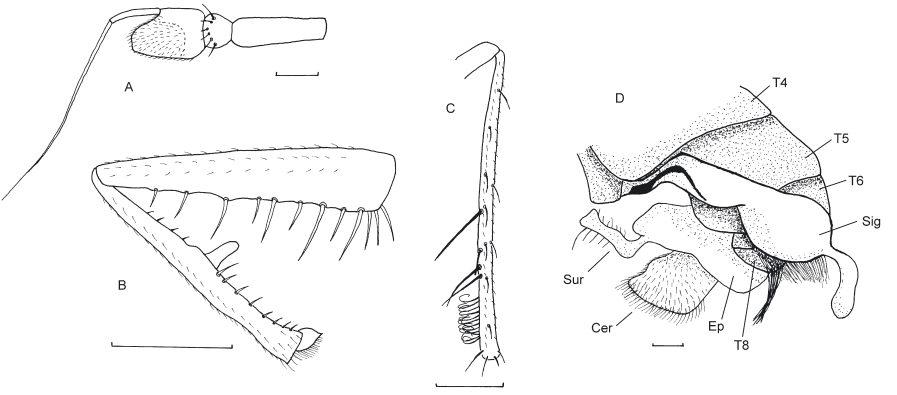

Fig. 1. *Scellus grichanovi* sp. n., male. — A, antenna, lateral. B, fore femur and tibia, posterior. C, mid tibia, anteroventral. D, postabdomen, left lateral: Cer = cercus, Ep = epandrium, Sig = signum, Sur = surstylus, T4, T5, T6, T8 = tergite 4, 5, 6, 8. (scale bar: A, D = 0.1 mm; B, C = 0.5 mm)

Abdomen: Metallic bronze-green, shining, bare of major setae. Postabdomen (Fig. 1D): Tergite 8 black, with a tuft of long white hairs; signum of cingulum white, basal rim black, basal half broad, pear-shaped, with dense white ventral hairs, apical part narrow, rubber-shaped. Hypopygium: Epandrium dark brown; surstyli ochreous, basally curved and projecting, apically stout, with a long dorsal seta; cercus ochreous brown, subrectangular, apically pointed, with dense white hairs.

Female: Unknown.

Etymology: The species is dedicated to the Russian dipterist Igor Yakovlevich Grichanov.

Remarks. *Scellus* Loew comprises 12 Palaearctic species (Negrobov 1978b, Yang 1998). Males of the genus possess a striking U-shaped structure arising in the membrane between abdominal segments 4 and 5 (cingulum) with an elongate lateral arm on either side of the abdomen of distinctive form bearing clusters of hairs (signum) (Hurley 1995). *Scellus grichanovi* is closely related to *Scellus paramonovi* and both species belong to Group IV (*spinimanus* group) sensu Hurley (1995). A differential diagnosis for males of both species is given in the key below.

1. First flagellomere 1.5 times as long as wide (Fig. 1A); fore tibia with a strong, subovate ventral spine at $^1/_2$, and with a short, flattened apical lobe (Fig. 1B); mid tibia not swollen and not curved, with 1 strong ventral seta at middle, and 2 additional strong ventral setae at $^3/_4$ (Fig. 1C); hind tibia without spine-like ventral setae; tergite 8 with a tuft of white setae; basal part of signum distinctly broader than apical part (Fig. 1D), basal part only with dense white hairs ventrally . . . . . ***Scellus grichanovi*** sp. n.

— First flagellomere not as long as wide; fore tibia with a small, pointed ventral spine at $^1/_3$, and with a broad, flattened apical lobe; mid tibia swollen and curved, with a biseriate row of 12–15 strong ventral setae; hind tibia with a ventral row of 3–4 spine-like setae on distal third; tergite 8 with a tuft of black setae; basal part of signum about as wide as apical part, basal part and apical part with dense white hairs ventrally . . . . . ***Scellus paramonovi*** **Stackelberg**

FAUNISTIC RECORDS

***Hydrophorus balticus* (Meigen, 1824)**

Material examined. 1 male: Turkey, Province Rize, Ovit Pass, 2600 m, South Ikizdere, 10.VII.1985. 1 male: Turkey, Province Kars, Railway Station Soganli, West Sarikamis, 2100 m, 5.VII.1985. 1 male: Turkey, Province Kara, Aras Valley, West Karakurt, 1300 m, 4.VII.1985.

Eastern distribution. Poland, Hungary, Czech Republic, Slovakia, "Yugoslavia", Bulgaria, Romania, Estonia, Ukraine, Russia, Turkey, Afghanistan, Mongolia.

Remarks. Listed from Turkey by Grichanov *et al* (2007).

***Hydrophorus callostomus* Loew, 1857**

Material examined. 36 males: Turkey, Province Erzurum, Pass West Oltu, 2200 m, 6.VII.1985. 3 males: Turkey, Province Kars, Aras Valley, West Karakurt, 1300 m, 4.VII.1985. 1 male: Turkey, Province Kars, Railway Station Soganli, West Sarikamis, 2100 m, 5.VII.1985.

Eastern distribution. Ukraine, Russia, Middle Asia.

Remarks. First record for Turkey.

***Liancalus virens* (Scopoli, 1763)**

Material examined. 2 males: Turkey, Province Hakkari, Sa Mountain, Varegös, South West Yüksekova, 700 m, 29.VI.1985.

Eastern distribution. Poland, Hungary, Czech Republic, Slovakia, «Yugoslavia», Bulgaria, Romania, Ukraine, Russia, Turkey, Kazakhstan, Kirgizia, Tajikistan.

Remarks. Listed from Turkey by Grichanov *et al* (2007).

***Scellus paramonovi* Stackelberg, 1926**

Material examined. 2 males: Turkey, Province Rize, Ovit Pass, 2600 m, South Ikizdere, 10.VII.1985. 1 male: Turkey, Province Erzurum, Pass West Oltu, 2200 m, 6.VII.1985.

Distribution. So far only known from Armenia.

Remarks. First record for Turkey.

***Schoenophilus versutus* (Haliday, 1851)**

Material examined. 1 male: Turkey, Province Erzurum, Pass West Oltu, 2200 m, 6.VII.1985.

Eastern distribution. Poland, Hungary, Bulgaria, Romania, Russia, Turkey.

Remarks. Listed from Turkey by Grichanov *et al* (2007) as *Thinophilus*.

***Thinophilus flavipalpis* (Zetterstedt, 1843)**

Material examined. 1 male: Turkey, Province Ankara, Tuz Gölü, Nord, 900 m, 10.VI.1985.

Eastern distribution. Poland, Hungary, Czech Republic, «Yugoslavia», Bulgaria, Romania, Estonia, Ukraine, Russia, Kazakhstan, Kirgizia.

Remarks. First record for Turkey.

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